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ABSTRACT

Children in eight classes of the 5th and 6th grades were randomly assigned to four groups. Group 1 received no training in creative dramatics; Group 4 was trained in the use of creative dramatics and were taught by the creative dramatics technique. Group 2 children were trained in the technique, but were not taught the material by the use of the technique; Group 3 children were not trained but were taught by the technique. The study was designed to answer the question as to whether the use of creative dramatics enhances learning and whether the child needed to be trained to benefit from such a technique. The analysis indicates that creative dramatics has an effect both on learning and retention, but the relationship varies, depending on the sex and training of the child. The findings also disclose that the higher the grade the less important creative dramatics is as a teaching technique. The sex difference was another salient factor; the data were such that using creative dramatics to teach cognitive material actually works against the boys' retention of the material. The girls, on the other hand, appeared to benefit by the technique, both in the initial learning, and the retention of the material learned. Although there appears to be trends in the area of grade and perceived intelligence, no conclusions can be drawn until they can be partialled on sex. (Author/CK)

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FINAL REPORT

Project No. 8-A-055
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EFFECTS OF CREATIVE DRAMATICS ON LEARNING AND RETENTION OF CLASSROOM MATERIAL

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U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

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U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
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SUMMARY

In this study children in eight classes of the 5th and 6th grades were randomly assigned to four groups. Group 1 children received no training in creative dramatics and were not taught by the creative dramatics technique; the other half of their class, Group 4, were trained in the use of creative dramatics and were also taught by the technique. Group 2 children were trained in the technique but were not taught the material by the use of the technique, Group 3 children, from the other half of the classes that made up Group 2, were not trained but were taught by the technique. The study was designed to answer the question as to whether the use of creative dramatics enhances learning and whether the child needed to be trained to benefit from such a technique.

The analysis indicates that creative dramatics has an effect both on learning and retention, but the relationship varies, depending on the sex and training of the child. The findings on grade and perceived intelligence must be held in abeyance until a larger study can be conducted allowing for more control of variables, however the findings disclose that it is conceivable that grade has an effect; the higher the grade the less important creative dramatics is as a teaching technique.

Another factor that was salient in the analysis was the sex difference. Males appeared to receive no benefit at all from the technique and in fact, the data were such that using creative dramatics to teach cognitive material actually works against the boys' retention of the material. The girls on the other hand, appeared to benefit by the technique, both in the initial learning, and the retention of the material learned.

The relationship between sex and creative dramatics and learning appears to be the strongest association in the study. Although there appears to be trends in the area of grade and perceived intelligence, no conclusions can be drawn until they can be partialled on sex.

I

INTRODUCTION AND CONCEPTUALIZATION OF THE PROBLEM

Introduction

"Creative Dramatics...makes use of a story with a beginning, a middle, and an end. It is, however, always improvised drama. Dialogue is created by the players, whether the content is taken from a well-known story or is an original plot. Lines are not written down or memorized. With each playing, the story becomes more detailed and better organized, but it remains extemporaneous in nature and is at no time designed for an audience.

The re-playing of scenes is different from the rehearsal of a formal play, in that each member of the group is given an opportunity to play various parts; therefore, no matter how many times the story is played it is done for the purpose of deepening understandings and strengthening the performers rather than perfecting a product. Scenery and costumes have no place in creative dramatics, although an occasional property or piece of a costume may be permitted to stimulate the imagination. When these are used, they should not be considered mounting, or suggest production. Most groups do not feel the need of properties of any kind, and are generally freer without them." [1].

As McCaslin points out elswhere[2], role-playing is a fundamental part of the creative dramatic process and has been used by several applied disciplines for the treatment of various forms of abnormalities. However, in creative dramatics as well as in psychodrama, or other areas where role-playing is used as a technique, the emphasis is on developing those aspects of the self having to do with such things as self-image,

self identity, sensitivity to one's self and others. An examination of the role-playing concept indicates that there is more to the role-playing process than the development of values and self insight.

Before the role-playing process can be examined, however, it is necessary to conceptualize role. Although role is conceptualized in several ways,[3] it will be used in this paper to mean the behavior and attitudes expected of an individual in a position, where a position is a place in some social structure, defined in terms of its function or purpose. In other words, an individual in a given position is expected to behave in a certain way and have attitudes and the term role is used to denote the expected behaviors and attitudes. It is implicit in this definition of role that self concept, identity, and/or values are not the only elements involved in the role, but the knowledge, and skill necessary for the proper enactment in the position is also expected. For an example, we not only expect a garage mechanic to be honest, efficient, respectful of our position, etc., but also to have the knowledge about the operation of the parts of a car and the tools associ ated with repairing the car. In fact, in this particular position, we are more concerned about the knowledge expected than we are about the attitude. However, the degree to which the emphasis is placed on either the attitude or the knowledge will vary depending on the position. Having conceptualized role, we will turn to an examination of role-playing.

As the term implies, role-playing is the conscious or deliberate attempt to engage in that behavior associated with some position. This is distinguished from role enactment which is engaging in the behavior associated with a position within which we identify ourselves. Role-playing is probably a pre-condition to role enactment but all role-playing does not

necessarily lead to an internalization of the attitudes associated with the position.

Historically, the process of role-playing has been associated with self-awareness, identity, creativity, etc., depending on the particular disclipline and the objectives of the professionals in the disclipline. However, as conceptualized above, we can see that the concept of role involves more than attitudes and/or values; it also involves the knowledge implicit in the role behavior.

Conceptualization Of The Problem

The knowledge component of the role may be emphasized as well as the other components that have historically been emphasized. In fact, the whole process of role-playing in creative dramatics is based on a certain amount of knowledge associated with the position the individual is assigned to play. In creative dramatics the cast must be defined, i.e., there must be a minimal amount of structure before the role playing can proceed. Involved in each position cast is a minimal amount of knowledge expected of the individual playing the role. For example, if a person is cast as a worm, and the individual playing the role jumps around like a kangaroo, it is unlikely that this behavior would be defined as being creative.[4] In this example, if the participant were corrected in his role-playing, this correction would be based on his lack of knowledge of the position in which he had been cast. Once the individual is corrected, the authors suggest that the knowledge would be learned and retained longer than it would have, had he learned it in more conventional means.

Now the question arises as to the meaning of creative dramatics; or at what point does role-playing stop being creative dramatics and become live theatre? This is not an easy question to answer because the distinction between live theatre and creative dramatics involves numerous variables, e.g., necessary acting skills, props, script, audience, rehearsals, and knowledge. For the purposes of this paper, we are assuming that creative dramatics can involve the learning and acting out of given information without a formal script, props, acting skills, etc. If creative dramatics is defined in this way, then it can be used as a method of classroom instruction to teach different subjects, e.g., social studies,

history, astronomy, and perhaps even basic arithmetic.* It is the objective of this investigation to determine whether creative dramatics can be used as an effective method of classroom instruction for teaching certain kinds of cognitive materials.

* This is basically what is being done on the television series, Sesame Street; using dramtatizations to introduce pre-schoolers to basic numbers.

Conceptual Basis

Most adults in a society have a minimal amount of knowledge of a number of positions which they do not occupy. It is on the basis of this knowledge that people unknown to each other can engage in social interaction, i.e., as long as they are aware of the other's position. Most persons, every day, engage in interaction with people whom they do not know and the outcome of this interaction is so predictable that they do not even think about the role of the other's position. A number of events come to mind...from buying gas to stopping at a traffic light. When the outcome of the interaction is not predictable, but we must nevertheless engage in it, the individual usually engages in what the sociologist has called "role-taking"[5] which is also dependent on knowledge of the position's role.

Role taking is the mental process that is the counterpart to role-playing. Whereas role-playing is overt, role-taking is covert, In thinking of the process in terms of the theatre, role-taking is the rehearsal, where the individual occupies both positions, his own and the other's, simultaneously and engages in interaction, Again, it should be stressed that the conscious process of role-taking is normally engaged in only when the otucome of the interaction is not predictable and by rehearsing we intend to increase the chances of the outcome we desire. Although both role taking and role-playing are very similiar, role-playing appears to be antecedant to role taking.

Initially, role-playing is actively engaged in by children when the child assumes the position of the other physically, e.g., when the female child adopts the role of mother viz a viz her doll. However, as the age of the child increases, she lets a number of dolls or any other kind of toy assume the position in time and space and "they" provide the dialogue.

However, when they assume the different positions there is also some degree of identification with that position as can be witnessed by the change of facial expression and body posture as the child assumes one position and then another. This identification, or self involvement, with the position results in any event effecting the position also having an effect on the child; however, since the child sets the stage in the first place there is little chance of an occurence that was not created by the child. On the other hand, if the role-playing situation is manipuated by someone else and the child identifies with the position, he is acting out, then an effect on the position played will have more meaning to the child. Although role-playing is antecedant to role-taking, there is no evidence that one picks up where the other leaves off. That is, the child may not be able to take various position mentally when role-playing is defined as being something that children should outgrow.

Before going further into this developmental process of role-taking, a further ditinction will be made between role-taking and role-playing. As with role-playing, the child can engage in role-taking without necessarily identifying with any of the positions involved. Earlier it was pointed out that the individual engaged in the mental interaction process in which he occupied two positions, his own and the other's, but this need not be the case....in fact, the individual is in no way restricted as to the objects he assumes the position of, except by his own knowledge. His identity can be tied in with all the positions or none of them. However, the more he identifies with a position, the greater will be the effect on his self when he mentally assumes that position. If, however, during the interaction process he sees no relationship to himself, the learning is minimal and the effects not retained. The object which initiates the

role-taking process may be anything, including his own self. What is being suggested here is that a child reading a story, working a math problem, watching live theatre, or watching a football game will benefit from the experinence to the degree he can take the role of some other that is tied in, or perceived to be connected with, the self. In other words, the experience must be in some way associated with the self if the experience is to be retained. If children could carry on this mental process of taking the role of some other and identifying with it, and could do this for any activity in which they are engaged, then there would be no reason to suspect that creative dramatics would have any effect, which brings us back to the development of role-taking and role-playing.

If the child cannot engage in role-taking or he cannot take the role of some position associated with material to be learned, then the learning and retention of the material is of no value to him. If on the other hand, the child can be induced to occupy a position by role-playing and and it is further assumed that a greater number of children will be able to identify with the experience, then creative dramatic should have an effect on the learning of materials associated with the role being played by the child.

Survey of Literature on Creative Dramatics

Creative dramatics experts agree generally about the philosophy but differ in methodology and statement of objectives. A few creative dramatics teachers in this country practice child drama as developed by British educators Peter Slade and Brian Way[6] A few teach improvisational theatre according to techniques developed by Viola Spolin.[7] Most teachers, however, practice creative dramatics according to philosophies and methodologies described in one of six major textbooks in the field.[8]

In appraising creative dramatics over a period of about forty years, Geraldine Siks concurs with her former teacher Winifred Ward in her philosophy that "though creative dramatics, like all other arts, should first of all be enjoyable, its objective in education is the individual and social development of the child."[9] Siks maintains that the actual practice of creative dramatics has gradually moved from a personality development subject to a subject concerned primarily with theatre arts.[10] None of the experts consider creative dramatics simply as a useful tool for teaching subject matter.

Winifred Ward maintains that when teachers use creative drama as a tool to teach subject matter or as a means of testing children's accuracy in learning, they are "making a cart-horse of drama."[11] Creative dramatics might be recreational, theraputic, and/or educational in the sense that one must have information in order to satisfactorily create a work of art. But these benefits are secondary to the major value which is the creative development of the individual.

In her appraisal, Siks admits that a more precise philosophy of creative dramatics is needed if it is to gain wider acceptance. In the most recently published summary of creative dramatics objectives, as stated by the experts,

Juanita Fletcher placed them in two categories: first, objectives with specific aims for each experience such as those related to formation of values, insight into self, parents, school, catharsis between teacher and class, etc., and second, subject-matter centered objectives related to social studies, science, appreciation of the arts, etc.[12] If there is a single objective, Fletcher's summary reveals the confusion in the field. On the one hand, experts appear to advocate teaching creative dramatics as an art for the purpose of creative child development. On the other, all experts offer specific suggestions for classroom teachers wishing to use the technique to teach subjects. At the 1967 American Educational Theatre Convention, Ann Shaw presented an oral progress report on her doctoral dissertation, an analysis of the several major texts according to the methods of Krathwohl and Bloom to develop a taxonomy of behavioral objectives in creative dramatics. She found that a surprisingly high percentage of the experts' objectives, when stated in behavioral terms, related to the learning of subject matter.

Regardless of what the experts say about the objectives of creative dramaticsm the fact remains that most elementary teachers (who are not creative dramatics specialists) use creative dramatics to teach subject matter. This is the way they, and curriculum specialists justify its existence in their classrooms. And each year, more teachers are using this technique. By 1957, it was estimated that higher education institutions were providing creative dramatics training for over 4, 000 students per year, many of whom were future elementary teachers. Since then, though figures are not available, it is safe to say the figure has at least tripled.

Although a few studies have offered insight into the effects of creative dramatics on personality, creative behavior and articulation disordered,[15] this is the first research project developed to investigate the effects of

of creative dramatics on children as it is most frequently used by teachers in their classrooms, to aid in learning subject matter.

Restatement of the Problem

Although the stated objectives for using creative dramatics deal with the development of the whole child, the review of the literature discloses that as a technique it primarily aims at the affective component, primarily dealing with the child's relationship with others, and/or the self or personality and is not aimed at the cognitive component of the self or personality. If creative dramatics is to recommended as a general method of classroom instruction, then someone must empirically demonstrate that the tecnhique can be used to teach general classroom material.

On the basis of the preceding conceptualization and review of the literature the following hypothesis is stated:

> Creative dramatics as a classroom technique for teaching regular classroom material, i.e., factual information, will enhance the child's learning and retention of the material.

Techniques

To measure the learning of cognitive material, three stories were selected from a 5th grade reader entitled Bold Journeys, published by Macmillan in 1967. The stories were selected on the basis that there was a low probability that the children previously had read the stories; that they would lend themselves to teaching certain details, and there did not appear to be a value being introduced. (See Appendix B)

A test was written to cover each story which emphasized factual details within the story. [16]

Test Administration: Each test was administered three times. The teachers were instructed [17] to administer all three tests without the child having read any of the stories. This score would serve as a base line to measure change. The first story was taught a week later allowing the teacher to use any teaching technique she wished. The second story was taught a week later, dividing the class into the previous two groups with the teacher using creative dramatics to teach half the group, and her own method of classroom instruction to teach the other half.[18] The third story was taught a week later with the teacher again using any method of instruction she desired. The second test administrations were given after each story; part 1 concerning story one was given after the first story,etc.

The third administration occured a week after the teaching of the third story. The combination of these three administrations over the second story provided a base line to measure both the immediate effects of using creative dramatics and the retention of material taught by the use of creative dramatics.

AN INVESTIGATION OF THE DIRECT AND INDIRECT EFFECTS OF CREATIVE DRAMATICS ON THE LEARNING AND RETENTION OF CLASSROOM MATERIAL

II

RESEARCH DESIGN

Introduction

Although there were extensive modifications in the research design as originally proposed, the following discussion will deal with the way the research was actually conducted and carried out.[19] A discussion of the possible effects these modifications may have had upon the results of this study will be included in the section, A Methodological Critique, Part IV, Summary and Conclusions.

General Procedures

Sample: The students on which the experiment was conducted were determined by the teacher who volunteered for a creative dramatics, 3 credit course, workshop. There were eight classes; four classes each in 5th and 6th grades. We wanted to restrict the student sample to two consecutive grades so that if grade of student had any effect on the learning of material taught by creative dramatics, we would have enough cases to explore additional variables for additional insight.

The breakdown of the students by grade and sex is presented in Table II: 1.

TABLE II: 1

GRADE AND SEX OF STUDENTS
(in percents)

	Grade			
	5th (1)	6th (2)	Total	
Sex	%	%	%	(N)*
a) Males	29	18	47	
b) Females	29	24	53	
Total %	58	42	100	218

*A capital (N) will be used throughout the study to denote reference to the total number of cases in the table. A small (n) will be used when reference is made to the number of cases that make up a proportion of the total number of cases in the table.

The teachers in the sample were volunteers for the course workshop and the investigators had no control over their selection, i.e., four 5th grade teachers and four 6th grade teachers volunteered. The teachers taught in two very different school systems, four teachers from each, and within each school system, the teachers taught in two schools. This heterogeneity among teachers was beyond the control of the investigators; however we will examine the effects of school systems, schools within systems, and sex of teacher as to their effects on the results.

Training: All teachers completed the same upper-level 3 credit course in Creative Dramatics with a grade of B or A. The course consisted of 9 five-hour classes over a 9 week period or a total of forty-five hours of training. Of these, 8 hours were spent observing 8 demonstration classes taught by a skilled creative dramatics teacher for fifth and sixth grade children, 15 hours were spent in active teacher involvement in improvisation exercises, and the rest spent in lecture-discussion. Thus all teachers had the same training.

The students in each class were divided into two groups as follows: the teachers provided an alphabetical list of their class with the sex, and their perception of the intelligence of each child, as indicated on a three point scale of above average, average, and below average. The students were divided into two groups systematically by taking every other child and placing him in the same group; each group was then inspected for a disproportionate distribution by sex and perceived intelligence. Students were then moved from one group to the other until there was an equal number of males and females, above average, average and below average students in each group. The groups were then designated as Group I and Group II.

The teachers were then instructed to train the Group II students

in the use of creative dramatics. This was done for two reasons; 1) it was required as part of the workshop for the teacher to use creative dramatics with children, and 2) to provide two groups with which to use creative dramatics, trained (Group II students) and untrained, (Group I students). This training was conducted by the teachers over a period of eight weeks.

This concludes the section on general procedures of the research design. As can be seen from the discussion above, the study used an experimental design with control groups within each class. Within each grade level there were two teachers who would apply creative dramatics to Group I students, untrained, and two teachers using creative dramatics on Group II students, trained. In essence, there were eight experimental situations, which were varied systematically on two variables, grade, and training in the use of creative dramatics.

The objective of the three stories was to decrease the salience of the second story where creative dramatics was used. Although the data from the tests over the first and third stories could be used to gain further insight into the use of creative dramatics, the analysis was beyond the time limitations of this phase of the research. The remainer of the discussion deals with only the second story.

Scoring Procedure: The first intention was to compare the raw scores and measure change on the assumption that there would be little variation between teachers on the first administration. This proved not to be the case, and the variation could not be explained by any known variable. The procedure finally used was to measure the amount of change in each child between the first and second administrations, which would reveal the immediate effects, and the first and third administrations, which would measure retention.

Cutting Points: The data will be collapsed into two and four categories with the size of the categories determined by the size of the marginals. That is, the data will be collapsed so that an approximately equal number of cases will fall into each category. The reason the collapsing is done on the basis of the marginals rather than on the basis of the scores, is because the highest level of measurement one can assume with this data is ordinal measurement.

Statistical Tests: In the original proposal (See Appendix C), a test of significance and certain measures of association were to be calculated on the data. Using Chi square and two measures of association which were sensitive to different patterns of relationship, it was found that certain patterns of relationships were not revealed by these statistical measures. Since the modification of the original design was necessitated, resulting in a loss of control over antecedant variables,, e.g., sex of teacher, school, and school system, it was decided to base the interpretation of the data on percentage differences. At no time in the interpretation of the data should the reader assume that given percentage differences are statistically significant or that the associations are necessarily valid. However, when certain patterns persist, or when previous or later patterns appear to be logically influencing a pattern being examined, this researcher assumes that in any repetition or replication of this study, these factors should be taken into account.

Preliminary Analysis

Sex of teacher, school system, and schools within systems were not foreseen as being variables to be investigated in the study. However, due to time factors we were not able to control on the above three variables as we had anticipated. During the data analysis several things occured that seemed to indicate the above three variables might be factors influencing the findings and because of this we felt there was a need to investigate these variables first.

To investigate this problem of differences between the three variables cited above, the decision was made to look at the difference between test #1 and test #2 for the Group I students only. These students were not taught the material by creative dramatics...however, half of them did receive training in creative dramatics.Even though there should be no reason to suspect the ones who received training would do better or worse than those without training, there is a possiblity that the increased attention given the students, could result in one or the other group doing better in school. Table II: 2 presents the relationship between the Group I students who received training and those who did not receive training.

TABLE II: 2

TRAINING OF GROUP I STUDENTS AND SCORE DIFFERENCE BETWEEN ADMINISTRATION I AND II OF TEST B
(in percents)

	Training in Creative Dramatics	
	No	Yes
	(1)	(2)
Score Difference	%	%
2 -	23	17
3 & 4	23	26
5 - 8	31	36
9 +	23	21
Total	100	100
(n)	(44)	(47)

Table II: 2 would not lead us to assume that training in creative dramatics had any effect on the learning of material where creative dramatics was not used as a method of instruction. On the basis of this lack of association among the Group I students we will use this group to examine differences between school systems, sex of teacher, and schools.

Table II: 3 contains the association between school system and test score differences between the first and second administrations of Test B for Group I students.

TABLE II: 3
SCHOOL SYSTEM AND SCORE DIFFERENCE BETWEEN ADMINISTRATION 1 AND 2 of TEST B
(in percents)

Score Difference	School System: Seacoast (1) %	School System: Inland (2) %
a) 2 -	9	26
b) 3 & 4	17	29
c) 5 - 8	43	29
d) 9 +	31	16
Total	100	100
(n)	(35)	(56)

It is quite apparent that there are differences between school systems. The seacoast school system showed more improvement between administrations 1 and 2 than did the inland school system.

An examination of the sex of teacher and score differences is also revealing.

Table II : 4 presents these data.

TABLE II: 4

SEX OF TEACHER AND SCORE DIFFERENCE BETWEEN ADMINISTRATION 1 AND 2 OF TEST B
(in percents)

Score Difference		Sex of Teacher: Male (1) %	Female (2) %
a)	2 -	30	14
b)	3 & 4	30	21
c)	5 - 8	28	37
d)	9 +	12	28
	Total	100	100
	(n)	(33)	(58)

The third factor to be examined is the school. Table II: 5 presents the data to examine the relationship between school and score difference.

Score Difference		School: Seacoast A (1) %	Seacoast B (2) %	Inland C (3) %	Inland D (4) %
a)	2 -	29	4	0	47
b)	3 & 4	29	14	17	38
c)	5 - 8	29	46	50	12
d)	9 +	13	36	33	3
	Total	100	100	100	100
	(n)	(7)	(28)	(24)	(32)

Table II: 5 discloses that there is a great variation between schools. In fact, on the basis of size of class and proportion of male teachers to female teachers within schools, it appears that the biggest variation is between schools and not system, or sex of teacher. On the basis of this finding, school should be controlled on when examining the other tables. Although there are several ways to do this, one way is to let each class determine

their own cutting point and then to place them, if you use four categories, into one of the four categories on the basis of the distribution for the class alone. This process would have no effect on the findings because each class has its own control. The only cases where this would make a difference is where the variables being investigated vary between classes. The only two variables being investigated that could effect the outcome would be sex and perceived intelligence. If these vary between schools any conclusion could be contaminated by the operational procedure just described.

Table II: 6 and II: 7 show the association between school and sex, and school and perceived intelligence, respectively.

TABLE II: 6

SCHOOL AND SEX (in percents)

	School			
	Seacoast		Inland	
	A	B	C	D
	(1)	(2)	(3)	(4)
Sex of Student	%	%	%	%
a) Males	67	56	58	57
b) Females	33	44	42	43
Total	100	100	100	100
(n)	(15)	(61)	(50)	(63)

TABLE II: 7

SCHOOL AND PERCEIVED INTELLIGENCE OF STUDENT
(in percents)

	SCHOOL			
	Seacoast		Inland	
	A	B	C	D
	(1)	(2)	(3)	(4)
Perceived Intelligence	%	%	%	%
a) High	20	20	30	17
b) Medium	53	49	46	45
c) Low	27	31	24	38
Total	100	100	100	100
(n)	(15)	(61)	(50)	(63)

Although there does not appear to be much association between sex and school, there is a little association between perceived intelligence and school. The only other way to decrease the effects of the school is by partialling, but the number of cases in the sample prohibits this alternative. The only alternative is to let each class serve as its own base line and warn the reader that this could have an effect of the results.

The procedure to be followed to diminish the effects of variables that are peripheral to the stated problem, i.e., an examination of the effects on learning cognitive material by using creative dramatics will be: 1) to obtain the distribution of change by subtracting administration 1 from administration 2 of Test B; 2) taking each class and finding the median; 3) once the median has been located, the remaining categories will be collapsed so there are four categories of change, or quartiles, in each class. In the tables that follow, each case will be in a given quartile on the basis of his standing with the rest of his class, but he may be in a quartile with a case from another class that could have shown more or less improvement in the score differences between the two test administrations. The same procedure will be used on the differences between administrations 1 and 3 of Test B.

III

FINDINGS

Introduction

The findings will be divided into two major parts. The first part is concerned with the immediate effects on the learning of cognitive material when taught by using creative dramatics. As disclosed earlier in this report, these effects are determined by a difference in test scores between administration 1, where the student had received no prior exposure to the cognitive material, and administration 2, where the student was tested immediately after being exposed to the material. The second part will discuss the retention of cognitive materials when they are taught by the use of creative dramatics. These effects are determined by a difference in test scores between administrations 1 and 3, which were given at least 10 days following the teaching of the materials.

There were four groups of students in the experiment. The first group of students were untrained in the use of creative dramatics and were taught the material by a conventional method used by the teacher. The second group of students were trained in the use of creative dramatics, but the material was taught by the use of creative dramatics. The fourth and last group received training in the use of creative dramatics and were also taught the materials by the use of creative dramatics. The data will be broken down by these four groups to provide insight into the interaction of all the variables.

The Immedaite Effects On Learning Cognitive Materials When Taught By The Use Of Creative Dramatics

Table III : 1 contains the distribution of cases showing the relationship between the change in test scores and the use of creative dramatics in teaching.

TABLE III: 1

THE USE OF CREATIVE DRAMATICS AND CHANGE IN TEST B SCORES BETWEEN ADMINISTRATIONS 1 AND 2 (in percents)

	Use of Creative Dramatics	
	No (1)	Yes (2)
Change in Test Scores	%	%
a) Low	29	23
b) Below Median	25	26
c) Above Median	30	20
d) High	16	31
Total	100	100
(n)	(91)	(98)

An examination of this table discloses that there is an association between the use of creative dramatics as a teaching technique and the learning of classroom materials. Thirty-one percent of those using creative dramatics had a high degree of change and only 16% of the other groups had as much change. On the basis of this table, one could conclude that creative dramatics has an effect on learning cognitive materials. The next table, Table III: 2, however,, suggests that the effect may be due to some other factor.

Table III: 2 contains the distribution of the four different groups involved in the experiment. As discussed in the Research Design, Part II, each of the eight classes involved were divided in half, and one half received training in creative dramatics and the other half did not. When the material was taught, half of the untrained students were taught by the use of creative dramatics and the other half of their class, those who received training, were given the material using a conventional teaching technique. The other four classes were just the opposite; those students who received training were taught the material using creative dramatics and those who did not receive training were not taught by the use of creative dramatics.

It should be pointed out to the reader that in any table where training is a variable, students in column 1 and 4 are from the same 4 classes, and students in columns 2 or 3, and between 4 and 2 or 3, are not as valid as a comparison of students who are from the same classes, e.g., columns 1 and 4 or columns 2 and 3.

TABLE III: 2

TRAINING AND THE USE OF CREATIVE DRAMATICS, AND CHANGE IN TEST B SCORES BETWEEN ADMINISTRATIONS 1 AND 2 (in percents)

	No Trained in Creative Dramatics		Yes Trained in Creative Dramatics	
Change In Test Scores	No (1) %	Yes (2) %	No (3) %	Yes (4) %
a) Low	30	28	23	23
b) Below Median	30	21	28	23
c) Above Median	27	32	26	15
d) High	13	19	23	39
Total	100	100	100	100
(n)	(44)	(47)	(51)	(47)

Table III: 2 reveals some interesting and unexpected findings. If one compares the percents in column 1 with those in column 4, the first conclusion is that when material is taught by the use of creative dramatics, learning is enhanced. In fact, if the variable dealing with training had not been introduced into the design, the researcher would have drawn that conclusion. However, if one compares column 2 and 3 with column 1, there also appears to be an association, though not as high as between 1 and 4. (See Addendum) In the remaining tables, if being taught by creative dramatics is examined in terms of other variables, and training as a variable, is omitted, then the students who were trained but did not receive the material by the use of creative dramatics will decrease the size of the association. On the other hand, if training is used as a variable, the number

of cases in each column will be reduced. Since the reader is aware of the problem, grade, sex, and perceived intelligence will be examined first, without introducing training in creative dramatics as a variable, and then by introducing it as a variable.

Table III: 3 contains the relationship for grade, use of creative dramatics and change in test scores.

TABLE III: 3

GRADE AND THE USE OF CREATIVE DRAMATICS, AND CHANGE IN TEST B SCORES BETWEEN ADMINISTRAIONS 1 AND 2
(in percents)

	Grade			
	5th		6th	
	Use of Creative Dramatics		Use of Creative Dramatics	
	No	Yes	No	Yes
Change In Test Scores	(1) %	(2) %	(3) %	(4) %
a) Low	29	24	29	23
b) Below Median	21	24	29	27
c) Above Median	36	17	24	23
d) High	14	35	18	27
Total	100	100	100	100
(n)	(42)	(46)	(49)	(52)

As was the case in Table III; 2, the extreme cases yield an association but if the table were dichotomized at the median, there would be very little association. This is true in both grades. For grade 5, 35% of the students had a high change in test scores if they were taught with creative dramatics, and only 14% of those who were not taught with creative dramatics had a high test score. For 6th graders it was 27% when taught by the technique, and 18% when the technique was not used. However, once you combine those above the median, and compare, the differences tend to disappear. These distributions found in Table III: 1 and III: 3 lead one to suspect that some factor is operating that is independent of the variables examined up to this point.

Table III: 4 presents the percentage distributions by sex.

TABLE III: 4

SEX AND THE USE OF CREATIVE DRAMATICS, AND CHANGE IN TEST B SCORES BETWEEN ADMINISTRATIONS 1 AND 2
(in percents)

	SEX			
	Males		Females	
	Use of Creative Dramatics		Use of Creative Dramatics	
	No	Yes	No	Yes
	(1)	(2)	(3)	(4)
Change in Test Scores	%	%	%	%
a) Low	24	25	35	21
b) Below Median	31	30	16	21
c) Above Median	36	18	22	23
d) High	9	27	27	35
Total	100	100	100	100
(n)	(54)	(55)	(37)	(43)

Sex may be the variable that is effecting the other table. First, looking at the males, the reader can note that all of the relationship in the table is accounted for by the two groups who were above the median in change. Only 9 percent of those males who did not receive material taught by creative dramatics had high change, whereas 27 percent of those males who were taught by creative dramatics had high change. Yet, if the table were dichotomized, there would be no association between the use of creative dramatics and test score change. With the females, the pattern of association is different. In the first place, females tended to show more change in test scores when taught by the creative dramatics technique. On the other hand, much of the association in the table can be accounted for by the two categories with the lowest change which is just the opposite from males. Whether the difference in the pattern between males and females is spurious, related to some other factor, cannot be determined at this point. Not only could the patterns be related to schools, or teachers, or both, they also could be

related to the method of data collapsing and measurement, However, due to the limited number of cases and the lack of controls over teachers it would be impossible to determine the "true" nature of the relationship.

One also can compare alternate columns to see the effects of creative dramatics on change and sex. For students who were not taught by creative dramatics, 45% of the males showed change above the median, and 49% of the females showed a similiar change, which indicates that there is little difference in score change between males and females. On the other hand, for those students who were taught by the technique of creative dramatics, 45% of the males show change above the median and 58% of the females, which appears to indicate females are more effected by the technique than males.

Table III: 5 contains the distribution of cases by perceived intelligence.

TABLE III: 5

PERCEIVED INTELLIGENCE AND THE USE OF CREATIVE DRAMATICS AND CHANGE IN TEST B SCORES BETWEEN ADMINISTRATIONS 1 & 2
(in percents)

	Intelligence					
	Low		Medium		High	
	Use of Creative Dramatics		Use of Creative Dramatics		Use of Creative Dramatics	
	No	Yes	No	Yes	NO	Yes
	(1)	(2)	(3)	(4)	(5)	(6)
Change In Test Score	%	%	%	%	%	%
a) Low	39	45	30	12	12	17
b) Below Median	29	29	23	22	26	28
c) Above Median	29	10	30	27	31	22
d) High	3	16	17	39	31	33
Total	100	100	100	100	100	100
(n)	(28)	(31)	(40)	(49)	(23)	(18)

One has to be careful about the interpretation of those parts of the table composed of the students perceived to have low intelligence and those who are perceived to have high intelligence, because of so few cases. If the tables are dichotomized then the reader can see that creative dramatics as a teaching technique has a slightly negative effect on those students perceived to have low intelligence. Thirty-one percent of those who were not taught by creative dramatics had above median change, and only 26% of those who were taught by the technique had above median change. Also, the technique had a negative effect on those students perceived to have high intelligence; 62% changed above the median without creative dramatics and 55% changed above the median with creative dramatics. However, those students who are perceived as having average intelligence show an opposite pattern.

Creative dramatics had a positive effect on the learning of cognitive information by those students perceived to have average intelligence. Forty-seven percent of this group showed a change above the median when creative dramatics was not used as a technique and 66% changed above the median when the technique was used. One would like to examine this table when partialled on sex, however the limited number of cases in the sample prohibits this.

In examining the findings in the tables where training is used as a variable, the percentages being discussed will be combined so that the low and below the median changes are combined and the above the median and high changes are combined, because of the small number of cases involved. However, the table itself will not be collapsed. The only time this will not be done is if the uncollapsed pattern provides insight into understanding any of the preceding patterns. First we will look at the association between grade, creative dramatics, and learning, and change in test scores.

Table III 6 presents this distribution. (see next page) First, in looking at the fifth graders, we find that those who have had any contact, (columns 2, 3 and 4) with creative dramatics did better than those who did not have contact, (column 1); when the two rows for the above the median changes are combined, the percents are 56, 46, 61 for columns 2,3, and 4, respectively and 40 for column 1. Those that were not trained, but used creative dramatics to learn the material, (column 3) did not do as well as those fifth graders who were trained and did not use creative dramatics for learning the material.. An examination of the 6th graders shows also that the groups that had some contact with creative dramatics did better; however the difference was not as pronouced as it was for fifth graders. Another thing about the sixth graders is that 52% of those who were taught by the creative dramatics technique and were untrained, had above the median change while only 48% of those who were trained and were taught by creative dramatics had above the median change in test score differences. When comparing 5th and 6th graders, it appears that training helps the 5th graders more than the 6th graders when material is taught by creative dramatics; sixty-one percent and 48% respectively. On the other hand, sixth graders do a little better in learning with creative dramatics when they are not trained, (52%), than fifth graders (46%); however, the cases are so few that this may be a questionable interpretation.

Table III: 7 shows creative dramatics, training, and score change for males and females.

TABLE III: 6

GRADE, TRAINING AND THE USE OF CREATIVE DRAMATICS, AND CHANGE IN TEST B SCORES BETWEEN ADMINISTRATION 1 AN 2 (in percents)

	5th GRADE				6th GRADE			
	Use of Creative Dramatics				Use of Creative Dramatics			
	No Trained in Creative Dramatics		Yes Trained in Creative Dramatics		No Trained in Creative Dramatics		Yes Trained in Creative Dramatics	
Change In Test Scores	No (1)	Yes (2)	No (3)	Yes (4)	NO (5)	Yes (6)	No (7)	Yes (8)
a) Low	% 40	% 22	% 25	% 22	% 24	% 35	% 22	% 24
b) Below Median	20	22	29	17	35	20	26	28
c) Above Median	33	37	21	11	24	25	30	17
d) High	7	19	25	50	17	20	22	31
Total	100	100	100	100	100	100	100	100
(n)	(15)	(27)	(28)	(18)	(29)	(20)	(23)	(29)

TABLE III: 7

SEX, TRAINING, AND THE USE OI CREATIVE DRAMATICS, AND CHANGE IN TEST B SCORES BETWEEN ADMINISTRATIONS 1 AND 2 (in percents)

Change In Test Scores	Sex: Males — Use of Creative Dramatics: No — Trained in C.D.: No (1) %	Males — Use of Creative Dramatics: No — Trained in C.D.: Yes (2) %	Males — Use of Creative Dramatics: Yes — Trained in C.D.: No (3) %	Males — Use of Creative Dramatics: Yes — Trained in C.D.: Yes (4) %	Females — Use of Creative Dramatics: No — Trained in C.D.: No (5) %	Females — Use of Creative Dramatics: No — Trained in C.D.: Yes (6) %	Females — Use of Creative Dramatics: Yes — Trained in C.D.: No (7) %	Females — Use of Creative Dramatics: Yes — Trained in C.D.: Yes (8) %
a) Low	19	30	25	27	46	25	22	20
b) Below Median	37	26	25	33	18	15	30	10
c) Above Median	33	37	29	7	18	25	22	25
d) High	11	7	21	33	18	35	26	45
Total	100	100	100	100	100	100	100	100
(n)	(27)	(27)	(28)	(27)	(17)	(20)	(23)	(20)

The most crucial finding here is that males who had been trained did more poorly than any other group when taught by creative dramatics. They had only 40% above the median change whereas the group who were untrained and did not use the technique had 44% above the median; and those who were not trained but taught by the technique had 50%. This relationship may be crucial; again, however, a lack of cases prevents a more thorough examination. The females on the other hand, had 70% receiving above median change when trained in the use, and taught by, creative dramatics, which is considerably above the other groups.

An examination of Table III: 8 contains no information that would shed any light on the difference up to this point. It would appear that sex and possibly grade, training, and the use of creative dramatics as a teaching technique, had an effect on the learning of cognitive materials. However, the amount of interaction among the three independent variables cannot be determined by so few cases.

(Please see next page for Table III: 8)

TABLE III 8

PERCEIVED INTELLIGENCE, TRAINING, AND THE USE OF CREATIVE DRAMATICS, AND CHANGE IN TEST B SCORES BETWEEN ADMINISTRATIONS 1 AND 2 (in percents)

Perceived Intelligence

Change In Test Scores	LOW Use of Creative Dramatics: No Trained In C.D. No (1) %	LOW Use of Creative Dramatics: No Trained In C.D. Yes (2) %	LOW Use of Creative Dramatics: Yes Trained In C.D. No (3) %	LOW Use of Creative Dramatics: Yes Trained In C.D. Yes (4) %	MEDIUM Use of Creative Dramatics: No Trained In C.D. No (5) %	MEDIUM Use of Creative Dramatics: No Trained In C.D. Yes (6) %	MEDIUM Use of Creative Dramatics: Yes Trained In C.D. No (7) %	MEDIUM Use of Creative Dramatics: Yes Trained In C.D. Yes (8) %	HIGH Use of Creative Dramatics: No Trained In C.D. No (9) %	HIGH Use of Creative Dramatics: No Trained In C.D. Yes (10) %	HIGH Use of Creative Dramatics: Yes Trained In C.D. No (11) %	HIGH Use of Creative Dramatics: Yes Trained In C.D. Yes (12) %
a) Low	50	32	33	57	35	26	16	8	6	25	27	0
b) Below Median	50	12	47	12	18	26	16	29	27	25	27	29
c) Above Median	0	50	7	12	35	26	40	13	40	12	19	29
d) High	0	6	13	19	12	22	28	50	27	38	27	42
Total	100	100	100	100	100	100	100	100	100	100	100	100
(n)	(12)	(16)	(15)	(16)	(17)	(23)	(25)	(24)	(15)	(8)	(11)	(7)

Creative Dramatics And The Retention Of Cognitive Materials

Retention, in this study, is measured by the difference between administration 1, given about 2 or 3 weeks before the creative dramatics teaching sessions, and 3, given at least 10 days after the creative dramatics session, of Test B. Administration 1 was used as a base line for measuring retention rather than administration 2 so that any unusual effects of the creative dramatics teaching session would not contaminate or make ambiguous the findings related to retention of the material.

Table III: 9 contains the distribution of cases over the change in test scores.

TABLE III: 9

THE USE OF CREATIVE DRAMATICS AND CHANGE IN TEST B SCORES BETWEEN ADMINISTRATION 1 AND 3 (in percents)

Change In Test Scores	Use of Creative Dramatics: No (1) %	Use of Creative Dramatics: Yes (2) %
a) Low	28	21
b) Below Median	24	30
c) Above Median	24	30
d) High	24	19
Total	100	100
(n)	(91)	(98)

The reader can see that in general there does not appear to be much difference whether or not the technique is used. Although the students taught creative dramatics do better on the lower end of the scale, the students who did not have material presented by the technique of creative dramatics did better on the upper end of the scale. If the lower two categories are collapsed, and the upper two categories are collapsed, there is 1 percentage point difference.

An examination of Table III: 10 shows that the students who had been trained in creative dramatics did better than the students who were not trained.(See Addendum) Here, as in the last part, we will examine the relationship with grade, sex, and perceived intelligence before we partial the data on training.

TABLE III: 10

TRAINING AND THE USE OF CREATIVE DRAMATICS, AND CHANGE IN TEST B SCORES BETWEEN ADMINISTRATIONS 1 AND 3
(in percents)

	Use of Creative Dramatics			
	No		Yes	
	Trained in C.D.		Trained in C.D.	
	No	Yes	No	Yes
	(1)	(2)	(3)	(4)
Change In Test Scores	%	%	%	%
a) Low	31	23	24	19
b) Below Median	23	25	31	28
c) Above Median	30	19	29	30
d) High	16	33	16	23
Total	100	100	1 00	100
(n)	(44)	(47)	(51)	(47)

Table III: 11 presents the data for examining the effects of grade and teaching by the use of creative dramatics on the retention of cognitive information.

TABLE III: 11

GRADE AND THE USE OF CREATIVE DRAMATICS, AND THE CHANGE IN TEST B SCORES BETWEEN ADMINISTRATION 1 AND 3 (in percents)

	Grade			
	5th		6th	
	Use of Creative Dramatics		Use of Creative Dramatics	
	No	Yes	No	Yes
Change In	(1)	(2)	(3)	(4)
Test Scores	%	%	%	%
a) Low	33	19	23	23
b) Below Median	26	35	23	25
c) Above Median	24	24	24	35
d) High	17	22	30	17
Total	100	100	100	100

This table shows that for 6th graders the use of the technique does not aid in retention of the material; 54% of the sixth graders who did not use the technique to learn the material were above the median, and 53% of those who did use the technique were above the median. The fifth graders appeared to benefit by the technique, 41% who did not use the creative dramatics were above the median, however, these differences are slight and should be used only as a basis for designing further research.

Table III: 12 contains the distribution for males and females who have or haven't been taught by the use of creative dramatics, or changes in test scores.

TABLE III: 12

SEX AND THE USE OF CREATIVE DRAMATICS, AND CHANGE IN TEST SCORES BETWEEN ADMINISTRATION 1 AND 3 (in percents)

	Sex			
	Males		Females	
	Use of Creative Dramatics		Use of Creative Dramatics	
	No (1)	Yes (2)	No (3)	Yes (4)
Change in Test Scores	%	%	%	%
a) Low	24	22	32	21
b) Below Median	22	30	27	28
c) Above Median	34	30	11	30
d) High	20	18	30	21
Total	100	100	100	100
(n)	(54)	(55)	(37)	(43)

An examination of this table reveals that males who were not taught by creative dramatics did slightly better than females who were taught by creative dramatics; 54% as compared with 51% when the two categories above the median change are collapsed. The group doing the poorest, 41%, were the females who were not taught by creative dramatics.

Before we make any generalizations concerning this sex difference, we will wait until we have examined sex in conjunction with training. Turning to perceived intelligence, we find the same pattern as we found when we looked at the immediate effects.

Table III: 13 leads to the interpretation that the technique of creative dramatics tends to enhance the retention of material for the average child but has little or no effect on the retenion of material by children perceived to have below average and above average intelligence. As with sex, these data in Table III: 13 suggest a possible generalization, however until the effects of training are seen, any interpreation would be risky. (See next page for Table III:13)

TABLE III: 13

PERCEIVED INTELLIGENCE AND THE USE OF CREATIVE DRAMATICS, AND CHANGE IN TEST B SCORES BETWEEN ADMINISTRATIONS 1 AND 3 (In percents)

	Perceived Intelligence					
	Low		Medium		High	
	Use Of Creative Dramatics		Use Of Creative Dramatics		Use of Creative Dramatics	
Change In Test Scores	No (1) %	Yes (2) %	No (3) %	Yes (4) %	No (5) %	Yes (6) %
a) Low	54	45	20	10	8	11
b) Below Median	21	35	26	28	26	22
c) Above Median	18	10	27	40	26	39
d) High	7	10	27	22	40	28
Total	100	100	100	100	100	100
(n)	(28)	(31)	(40)	(49)	(23)	(18)

Turning to the first table which introduces training, TABLE III: 14, we find that fifth graders who received training did better than groups without training, even when creative dramatics was not used to teach the material. Groups 1 and 3, those untrained, had 34% and 39% above the median, respectively, and the trained groups 2 and 4, had 44% and 55% above the median, respectively. Column 6, sixth graders with training but not having creative dramatics as a technique to learn the material, had 60% above the median. This is 8 percentage points higher than group 1, 8 percentage points higher than group 3, and 9 percentage points higher than group 4. This finding could mean all differences are a matter of chance variation, or that some interaction is taking place among the variables that cannot be examined because of the sample size, or that there is some variable related to the findings that we either have no control over, e.g., sex of teacher, or that we do not know the variable involved. (See next page for Table III:14)

Table III:15 shows the distribution by sex, which is quite revealing. Males who had no contact with creative dramatics, i.e., untrained and not taught by the technique, did just as well as the females with the most exposure, i.e., trained and taught by the technique. Both groups, column 1 and 8 had 65% above the 65% above the median change. In addition, both these groups did better than any of the other groups. The percentage above the median for all eight columns supports the notion that the greater the exposure to creative dramatics by the male, the less he retains, whereas the greater the exposure to creative dramatics by the female, the more she retains. (See next page for Table III: 15)

Note: If creative dramatics is in some way related to children's theatre, which it is, because they both involve acting, then the finding above supports other findings in this area.

TABLE III: 14

GRADE, TRAINING AND THE USE OF CREATIVE DRAMATICS, AND CHANGE IN TEST B SCORES BETWEEN ADMINISTRATIONS 1 AND 3 (in percents)

Change in Test Scores	Grade: 5th — Use of Creative Dramatics: No — Trained in C.D.: No (1) %	5th — No — Trained: Yes (2) %	5th — Yes — Trained: No (3) %	5th — Yes — Trained: Yes (4) %	6th — No — Trained: No (5) %	6th — No — Trained: Yes (6) %	6th — Yes — Trained: No (7) %	6th — Yes — Trained: Yes (8) %
a) Low	46	26	21	17	24	20	26	21
b) Below Median	20	30	40	28	24	20	22	28
c) Above Median	27	22	25	22	31	15	35	34
d) High	7	22	14	33	21	45	17	17
Total	100	100	100	100	100	100	100	100
(n)	(15)	(27)	(28)	(18)	(29)	(20)	(23)	(29)

TABLE III: 15

SEX, TRAINING AND THE USE OF CREATIVE DRAMATICS, AND CHANGE IN TEST B SCORES BETWEEN ADMINISTRATIONS 1 AND 3 (in percents)

Change In Test Scores	Sex: Males — Use of Creative Dramatics: NO — Trained in C.D.: No (1) %	Males — NO — Trained: Yes (2) %	Males — Yes — Trained: No (3) %	Males — Yes — Trained: Yes (4) %	Females — No — Trained: No (5) %	Females — No — Trained: Yes (6) %	Females — Yes — Trained: No (7) %	Females — Yes — Trained: Yes (8) %
a) Low	26	22	18	26	41	25	31	10
b) Below Median	11	33	32	29	41	15	31	25
c) Above Median	37	30	32	26	18	5	26	35
d) High	26	15	18	19	0	55	12	30
Total	100	100	100	100	100	100	100	100
		(27)	(28)	(27)	(17)	(20)	(23)	(20)

The last table, Table III: 16 is anticlimactic after the preceding one, because if sex of the child is highly related to the retention of cognitive materials, when taught by creative dramatics, then all of the other tables cannot be interpeted unless sex is controlled upon. The size of the sample prohibits any further breakdown of the data to examine this. (See next page for Table III:16)

Conclusions

The preceding analysis appears to indicate that creative dramatics has an effect both on learning and retention, but the relationship varies depending on the sex and the training of the child. The findings on grade and perceived intelligence must be held in abeyance until a larger sample is drawn with more external controls. It is very conceivable that grade has an effect, in which creative dramatics becomes less important as a teaching technique, the higher the grade.

These data are only as good as the research design allows. The number of variables involved over which the researcher had no control reflects on the quality of the analysis. Some of the differences pointed out could quite easily be related to factors over which the researchers had no control. This point will be elaborated on in the final chapter, however the reader should be cautioned at this point that these data are not reliable for making generalizations about creative dramatics, but certainly can be used for designing further studies in this area.

TABLE III: 16

PERCEIVED INTELLIGENCE, TRAINING, AND THE USE OF CREATIVE DRAMATICS AND CHANGE IN TEST B SCORES BETWEEN ADMINISTRATIONS 1 AND 3 (in percents)

PERCEIVED INTELLIGENCE

Change In Test Scores	Low Use of Creative Dramatics				Medium Use of Creative Dramatics				High Use of Creative Dramatics			
	No Trained		Yes Trained		No Trained		Yes Trained		No Trained		Yes Trained	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
	(1) %	(2) %	(3) %	(4) %	(5) %	(6) %	(7) %	(8) %	(9) %	(10) %	(11) %	(12) %
a) Low	76	37	47	44	24	17	12	8	7	12	19	0
b) Below Median	8	31	33	38	24	26	32	25	33	12	27	14
c) Above Median	16	19	13	6	40	17	40	38	27	25	27	57
d) High	0	13	7	12	12	40	16	29	33	51	27	29
Total	100	100	100	100	100	100	100	100	100	100	100	100
(n)	(12)	(16)	(15)	(16)	(17)	(27)	(25)	(24)	(15)	(8)	(11)	(7)

SUMMARY AND CONCLUSIONS

SUMMARY

In this study children in 8 classes of the 5th and 6th grades were randomly assigned to 4 groups. Group 1 children received no training in creative dramatics and were not taught by the creative dramatics technique; the other half of their class, Group 4, were trained in the use of creative dramatics and were also taught by the technique. Group 2 children were trained in the technique but were not taught the material by the use of the technique; Group 3 children, from the other half of the classes that made up Group 2, were not trained but were taught by the technique. The study was designed to answer the question as to whether the use of creative dramatics enhances learning and whether the child needed to be trained to benefit from such a technique.

The analysis indicates that creative dramatics has an effect both on learning and retention, but the relationship varies, depending on the sex and training of the child. The findings on grade and perceived intelligence must be held in abeyance until a larger study can be conducted allowing for more control of variables, however the findings disclose that it is conceivable that grade has an effect; the higher the grade the less important creative dramatics is as a teaching technique.

Another factor that was salient in the analysis was the sex difference. Males appeared to receive no benefit at all from the technique and in fact, the data were such that using creative dramatics to teach cognitive material actually works against the boys' retention of the material. The girls on the other hand, appeared to benefit by the technique, both in the initial learning, and the retention of the material learned.

The relationship between sex and creative dramatics and learning appears to be the strongest association in the study. Although there appears to be trends in the area of grade and perceived intelligence, no conclusions can be drawn until they can be partialled on sex.

CONCLUSIONS

The results of this study are inconclusive so far as making general recommendations regarding the use of creative dramatics as a means of classroom instruction. In fact, until more research has been conducted, teachers should hesitate to use the technique until we know more about how the factor of sex is related to any form of acting. Because of this need for additional research, a research design is presented at the end of this section that attempts to correct some of the weaknesses in our original design. However, before presenting this design one of the findings will be discussed at length because of the effect it had on the results.

The reader may recall that Table III: 2 disclosed that the students who had been trained in creative dramatics showed more improvement between administrations even when creative dramatics was not used to teach the material. This unforseen finding must be taken into account in any further research design that has to do with different methods of classroom instruction when a control group is used. Several explanations come to mind but two of these have a direct bearing on the use of creative dramatics in the classroom.

The first explanation has to do with the well known Hawthorne effect. In this case people can show an improvement simply because they are getting more attention even when this additional attention is detrimental to the goal. In this study the teacher was working with his or her own students and had to divide the class into two groups so that one group could be trained. This

meant that she had to leave the group that was not being trained with some other teacher. The entire class could see that some students were receiving some special kind of attention and this could enhance the learning of the children who received this attention. If the Hawthorne effect is working here then the improvement has nothing to do with the use of creative dramatics but has to do with the special attention. The proposal at the end will eliminate the possibility of the Hawthorne effect.

A second explanation is that creative dramatics actually enhances the child's perspective of himself and the situation around him. The stories and the tests were similar enough so that when the child read them he could take a different perspective than he ever could before, which facilitated his retention of the material. If this is the case and once the child has learned that he retains more and the story has additional meaning when he puts himself in the place of one of the characters, then this could mean that an acquaintance with the creative dramatics process could enhance his learning for a long time. That is, maybe the children trained in the creative dramatics technique will always do a little better because of this new perspective of the material.

Another relationship that deserves additional comment has to do with the finding that creative dramatics enhances the learning of females but may be a detriment to the learning of males. This researcher certainly did not anticipate this finding, although admittedly biased in a direction that if the data turned out in a certain way, it would not be missed. The interpretation of this finding would depend on the orientation of the individual examining the data, however two possible explanations of the sex difference will be briefly dealt with and the empirical means for determining which explanation is the better.

First, the female, because of her earlier maturation, could be better than the male at role-playing, which is an essential ingredient of creative dramatics. If this is true, the male may enjoy the activity, but creative dramatics has no meaning for him except as an activity; in other words, his involvement is with activity per se, not the role he is enacting. However this explanation does not account for either sex that were trained but were not taught by the technique; the males of which did worse and the females better than the group that was not trained and was not taught by the technique. The second interpretation seems to be sounder than the preceding one and would be supported by the findings.

Creative dramatics may be defined with feminine connotations so that the male is actually inhibited from learning by the technique, because of his preconceived idea of female activities. This explanation is supported by the data. However both of these possibilities could be tested in cross grade research. If the sex differences are due to the ability of the individual involved, then learning and retention should increase from one grade to another, with the female always doing a little better, but the male gradually improving. If, on the other hand, the activity is a feminine one, as perceived by the male, then the male should do better relatively to the untrained group and the females, as you go down in grade. Some insight on this could be obtained if there were more cases in the study and more pre-research controls.

The research design that follows will answer some of the questions raised by this study and correct some of the weaknesses in the design. The proposed design is meant to serve as a guideline for future research in this area.

1. The following pre-controls should be incorporated into the design.
   a. Two large schools within a single system (probably a large metropolitan area.)

b. Both schools should have students with similiar economic and religious backgrounds.

c. Each school should have at least two classes at each grade level.

d. There should be 4 fourth grade classes, and 4 fifth grade classes.

e. The teachers should all be of the same sex.

2. The study should be conducted over a two year period.

a. The first year should accomplish two things:

1) The teachers should receive classroom training, and then apply the technique to students who definitely will not be in the study, preferably from different schools than those in 1 above. The students should be of the same grade as that taught by the teacher.

2) The testing instrument should be designed and pilot tested. (The instrument in this study did not have a pilot test.)

b. The second year should be divided into two parts:

1) Prior to the Christmas vacation, half the students in each class should receive training in creative dramatics. The class should be divided randomly, but with each group having equal numbers of children with respect to sex, and perceived intelligence.

a) The children should be taught by one of the seven teachers who are not their teacher.

b) The training should be done so as not to separate the two groups during regular class time, i.e., the training should be conducted either at noon or after school, or on Saturdays.

c) Students from the same class should be split up so that only about 3 to 6 students of the half of the class that is to receive training are taught together by someone, other than their teacher.

2) The second part should be separated from the first by about a month.

a) Around the first of February, the teacher should give the first administration of Tests A, B, and C. She should use the pre-tested test, but should produce it as she would any of her tests...This should be done with all the tests.

b) Two weeks after this, she should teach Topic A and test the children over the topic. The teaching and testing should be done at the same time.

c) Two weeks after teaching Topic A, Topic B should be taught. This should be done exactly as in this study.

d) Two weeks after this, the teacher should read and test over Topic C.

e) If possible, the teacher should wait 5 weeks and then give all 3 tests again.

The major change in this design which is different from the original, is the fact that the children are separated from their own teacher and classmates, and the study does not pull them out of a regular class. This should eliminate some students feeling left out and should also prevent cohesion from building up between classmates.

This study should definitely be replicated because of its weaknesses. It should be conducted on fourth and fifth graders. Special emphasis should be placed on the sex variables in the analysis. If creative dramatics appears to be a fruitful technique of classroom instruction and the research shows there is a relationship with the sex of the student, this researcher would have serious reservations about introducing it as a general classroom technique.

FOOTNOTES

1. McCaslin, Nellie, Creative Dramatics In The Classroom. New York: David McKay Co., Inc., 1968. p.6

2. Ibid, p.6

3. See for example, Richard Dewey, "The Theatrical Analogy Reconsidered", in the American Sociologist, Vol. 4, No.4, November, 1969 pp 307-311; or Arnold M. Rose, "A Systematic Summary of Symbolic Interaction Theory", in Human Behavior & Social Processes, edited by Arnold M. Rose. New York: Houghton Mifflin Co., 1962; or Ralph H. Turner, "Role Taking, Role Standpoint & Reference-Group Behavior", in American Journal of Sociology, Vo. 61, January 1956, p. 317.

4. The authors are not saying it couldn't be defined as creative; the point is that whether or not it is, will depend on the purposes of engaging in creative dramatics.

5. Turner, Loc. Cit.

6. See Slade's Child Drama and An Introduction to Child Drama and Brian Way's Development Through Drama., practiced by specialists of the Looking Glass Theatre, Providence, R.I. and elsewhere.

7. See Viola Spolin's Improvisation for the Theatre, practiced by Rod Alexander of the Arena Stage in Washington, D.C. and in local schools sponsored by a federal grant.

8. Standard texts include Ward's Playmaking With Children, Isabel Burger's Creative Play Acting, Pamela Walker's Seven Steps to Creative Dramatics, Geraldine Brain Sik's Creative Dramatics; An Art for Children, Gertrude Kerman's Plays and Creative Ways With Children, and Nellie McCaslin's Creative Dramatics in the Classroom. Teachers trained for this research project studied the Ward and Siks text and learned about the ideas in the other books mentioned here.

9. Siks, Geraldine Brain, " An Appraisal of Creative Dramatics," Educational Theatre Journal, Vol. XVII, No. 4, p. 331.

10. Ibid

11. Fletcher, Juanita D., "Theatre Teaching in the Elementary School" (Conference on Theatre Research Special Edition) Educational Theatre Journal, Vol. XIX, 2A, June 1967. pp. 288-289.

12. Ibid

13. Though James A. Smith professes the value of drama to the creative development of the child, he also proceeds to list excellent ways the technique can be used to teach subject matter in six out of seven of his books in the Allyn and Bacon Series in Creative Teaching.

13. cont.
A glance at almost any book on elementary curriculum will reveal recommendations that the teacher use drama at least once per week. Many, but not all, refer the teacher to further reading in the field, recommending one or more of the standard texts mentioned in this paper.

14. Siks, Loc. Cit.

15. See a review of this research in the project application.

16. A fifth grade teacher from another school system, not involved in the research, was used as a consultant in the writing of the questions and selection of the stories.

17. See instructions to teachers in Appendix A. The instructions varied depending on the group with which the teacher was to use creative dramatics.

18. The original plan was to control the technique used by the teacher, however, this could have resulted in a false confirmation that creative dramatics was a better technique for teaching cognitive material. Teachers tend to employ that technique of instruction with which they feel most at ease, and by telling them how to teach the material, it could result in a technique they never use which could effect the learning process of the students. This decision resulted in placing creative dramatics against the most successful technique developed by each teacher.

19. A copy of the original proposal may be seen in Appendix C.

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APPENDICES

APPENDIX A

Teacher Instructions For Creative Dramatics Study

General:

The testing part of the study is supposed to be carried out over a five week period, however, time is at a premium at this point because of school closing for the summer. If necessary, give the students the pre-test at the beginning of the week but teach the first topic during the week and give the test over the first topic on Friday. The post-test can be given on a Monday after the students have had topic C. If both of the above suggestions are used, then the testing part of the experiment would run three weeks and one day. However, the longer you wait, up to a week, to give the post-test, the better the experiment.

With these instructions you have been given 5 separate packages. The following instructions should be completely read through so you get a general idea of the whole procedure. After you have read them through, go back and start the experiment. Please do not look ahead in the packages because I want to make sure you are exposed to the same material at the same time as all the other teachers.

Package # 1

Contents: Tests over Topics, A, B, C

Instructions:

A. None of your students is familiar with the material and they are not expected to do well on this test.
B. You may give the test to both groups at the same time.
C. Put date, and time of quickest student and time of slowest student, for each test, on the package.

Package # 2

Contents:

1. One copy of story A for you to use in teaching the subject.
2. Copies of the test to be administered to the whole class, both groups, after you have taught the subject.
3. A piece of paper for you to describe how you taught the topic, e.g., method used, work done by students, etc.

Instructions:

A. Teach story A to both groups in your normal fashion, using the procedures that have worked well for you in the past. You may read to the children, but do not let any of them read the story.
B. When you have spent the amount of time you would normally spend on such a topic, give the test to both groups of students.
C. Write a summary of what you did and how long you spent on the topic.
D. Put date and time of quickest student and time of slowest student on the package.

Package # 3

Contents:

1. A copy of topic B for you to use in teaching the material.
2. Copies of test B to be administered to both groups after the topic is taught.
3. Two sheets of paper for you to write an outline of just what you did in teaching the subject.

Instructions:

REMEMBER... YOU ARE TO SEPARATE GROUPS I AND II DURING THE TEACHING SEQUENCE.

A. Divide the class into the previous two groups that you have already worked with.
B. Use your normal teaching technique on Group I. Be sure and do not use Creative Dramatics on this group.
C. Use Creative Dramatics to teach topic B to Group II. Try to use the same amount of time as for B. above..
D. Administer the test over topic B. to both groups.
E. Write up a summary for each of the two groups, of the things you did to teach topic B.
F. Put date of test and time of quickest student and time of slowest student, for each group, on package.

Package # 4

Contents:

1. A copy of topic C for you to use in teaching the material.
2. Copies of test C to be administered to both groups.
3. A sheet of paper to describe what you did to teach the topic.

Instructions:

A. Teach story C to both groups in your normal fashion, using those procedures that have worked well for you in the past.
B. When you have spent the amount of time you normally spend on such a topic, give the test to both groups.
C. Write a summary of the techniques and procedures you used to teach the topic.
D. Include the date, time of quickest student, and time of slowest student, on package.

Package # 5

Contents:

Test over Topics A.B. and C.

Instructions:

A. Try to wait five days (at least a weekend) since you gave the test over Topic C.
B. Include the date, time of quickest student and time of slowest student, on the package.

APPENDIX B

A-T
TEACHER:_____ YOUR NAME:_____

SCHOOL:_____ YOUR GRADE:_____ YOUR AGE:_____

DATE:_____ YOUR SEX:_____

"FOOTPRINTS OF THE "SMOKE DRAGON"" BOLD JOURNEYS* p. 217

Mark the blank space in front of the answer you think is correct.

1, Hip Wo came to America from China:

___a. to work for the railroad, laying track
___b. for a vacation
___c. to learn the English language
___d. to find a wife

2. The "Smoke Dragon" was really:

___a. a small, harmless lizzard.
___b. a forest fire
___c. the railroad train
___d. the camp boss

3. One of Hip Wo's jobs was to chip away the rock to make a roadbed for the railroad. To do this, he was lowered over the cliff:

___a. on a crane
___b. in a basket
___c. in a box
___d. in a railroad car

4. While Hip Wo was making a hole in the cliff for the black blasting powder, there was:

___a. an earthquake
___b. a thunderstorm
___c. a blizzard
___d. a rockslide

5. To celebrate the coming of the train, Hip Wo:

___a. lit firecrackers
___b. whistled
___c. beat on a pan
___d. danced

6. Hip Wo was:

___a. an old man
___b. fifteen years old
___c. blind
___d. Japanese

*Macmillan, 1967

OOTPRINTS OF THE "SMOKE DRAGON" (continued)

7. The pack animals used to carry the supplies were:

___a. horses
___b. donkeys
___c. goats
___d. camels

8. While Hip Wo and his crew moved rails, the crew of American men were busy:

___a. firing up the engine of the train
___b. cooking the meals for the crew
___c. feeding the pack animals
___d. clearing trees from the path the train would travel

9. Hip Wo was chosen for the dangerous task of chipping a hole for the blasting powder because:

___a. he was not afraid
___b. he worked well and was small
___c. he was very strong
___d. he was smarter than the others.

10. For the dangerous task, Hip Wo had to be lowered by a rope around his body instead of in a basket because:

___a. the space into which he must go was too narrow for the basket
___b. the basket had been broken
___c. the baskets were all being used by other men
___d. he was too large to fit into the basket

11. What name did Hip Wo give to the mountain?

___a. Big Rocky
___b. Old Granite Face
___c. Old Man of the Mountain
___d. Smokey Mountain

Fill in the spaces:

12. It took _____men to lift one length of rail.

13. After landing at San Francisco, Hip Wo and his friends were taken by wagon and boat to _____ where they boarded the train for their journey to the mountains.

14. For the next few months, they would live in wooden shacks and_____.

15. The forest covered hills were so close to each other that Hip Wo thought they looked like a _____.

16. The three tools used most by Hip Wo and his crew were_____,_____ and _____.

B-T

TEACHER_____ YOUR NAME_____

SCHOOL_____ YOUR GRADE_____ YOUR AGE_____

DATE_____ YOUR SEX_____

DRIVING THE LAST SPIKE BOLD JOURNEYS* p. 231

In the blank space, or spaces, put the correct word, or words.

1. The last spike was made of _____.
2. The year of this famous event was_____.
3. The railroad lines being connected were the _____and the _____.
4. The site where the two railroads met was _____,_____.
5. To symbolize the joining of the two tracks, two _____touched each other.
6. Governor Stanford of _____ brought a special ceremonial tie decorated with _____.
7. Driving the last spike was important because it connected the _____and _____parts of the United States.
8. The junction point of the two railroads was 1,086 miles west of the _____ River, and 690 miles east of _____, California.
9. Another reason why this event was so important was that people from _____different continents worked on it.
10. At the moment the last spike was driven, a _____message was sent to Washington, D.C.

TRUE OR FALSE?

11. The actual connection was kept a secret so President Grant could make the announcement himself. _____.
12. Six special stakes...three from the North and three from the South, were presented to show the end of bad feeling over the Civil War____
13. The ceremonial spike is now in a museum in Washington, D.C. _____

*Macmillan, 1967

C-T

TEACHER_____ YOUR NAME_____

SCHOOL_____ YOUR GRADE_____ YOUR AGE_____

DATE_____ YOUR SEX_____

"HATS OFF TO THE DARING TRAPPERS/COLTER'S RACE Bold Jounreys* p.88

Mark the blank space in front of the answer you think is correct.

1. John Colter discovered the place we now call:

___a. The Grand Canyon
___b. Yellowstone National Park
___c. Death Valley
___d. Sun Valley

2. The reason so many men went to the wilderness to trap beaver was:

___a. to get away from the big cities
___b. to fight Indians
___c. because the beaver fur was in demand for hats
___d. because there were too many beaver

3. Colter's fellow trapper was killed by the Indians of the

___a. Blackfoot tribe
___b. Sioux tribe
___c. Apache tribe
___d. Chippewa tribe

4. When trying to escape from the Indians, Colter came to a river where he hid all day long.

___a. in an old canoe
___b. behind a tree
___c. in a beaver house
___d. underwater

5. Another name for the skin of the beaver or other fur animal is:

___a. pouch
___b. pelt
___c. hide
___d. bark

6. The Indians decided to punish Colter by:

___a. making him crawl on his hands and knees
___b. making him run a race through the cactus covered plain
___c. tying him to a stake and shooting him with arrows
___d. scalping him

*Macmillan, 1967

7. When he finally reached the safety of the nearest forest, Colter was:

____a. cut and bruised and his feet were full of cactus spines
____b. ready to go after the Indians
____c. loaded down with beaver skins
____d. clean and well dressed

8. The time period of this story was:

____a. the early 1900's
____b. about 1780
____c. the 1820's
____d. during the Civil War

9. For some time rich men had worn beaver hats, then suddenly everyone wanted a beaver hat because:
____a. beavers became easier to catch
____b. someone invented a machine that could make the material for hats by the thousands
____c. they were warmer
____d. there weren't any other kinds of hats

10. When Colter and his friend went trapping, they went:

____a. on horseback
____b. by wagon train
____c. in a canoe
____d. on a donkey

11. When the Indians saw Colter and his friend, they:

____a. signaled to them in Morse Code
____b. called to them in English
____c. shot at them with rifles
____d. signaled to them in sign language

12. Colter set off on the trapping journey with a man named Potts:

____True
____False

Fill in the blank spaces with the correct word or words.

13. There were different kinds of fur trappers; some worked for large fur companies and others were _____trappers, who worked on their own and sold their furs to the highest bidder.

14. Most of the fur trapping was done in the _____Mountains.